

APPARATUS FOR PERFORMING DOPPLER CORRECTION IN A WIRELESS COMMUNICATIONS SYSTEM

ABSTRACT OF THE DISCLOSURE

Apparatus for Doppler correction in a wireless communications system, including a first frequency synthesizer for generating a carrier signal oscillating at a rate responsive to a first input, a counter coupled to the first input for generating a Doppler compensation signal, the counter having a clock input, and a second frequency synthesizer coupled to the clock input for generating a clock signal oscillating at a rate responsive to a rate input.

The rate input is adjusted over time according to a predetermined sequence so that the Doppler compensation signal compensates for the Doppler effect experienced by, for example, ground-to-satellite communications in a satellite communications system.